**PRODUCT INFORMATION**

**17β-Estradiol**  
Item No. 10006315

**CAS Registry No.:** 50-28-2  
**Formal Name:** estra-1,3,5(10)-triene-3,17β-diol  
**Synonyms:** β-Estradiol, Estradiol, 17β-Oestradiol, E2  
**MF:** C18H24O2  
**FW:** 272.4  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ\text{max} = 281 nm

### Laboratory Procedures

For long term storage, we suggest that 17β-estradiol be stored as supplied at -20°C. It will be stable for at least two years.

17β-Estradiol is supplied as a crystalline solid. A stock solution may be made by dissolving the 17β-estradiol in an organic solvent purged with an inert gas. 17β-Estradiol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of estradiol in these solvents is at least 2.5 mg/ml in ethanol and 20 mg/ml in DMSO and DMF.

17β-Estradiol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 17β-estradiol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 17β-Estradiol has a solubility of 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Estrogens direct the development of the female genotype in embryogenesis and at puberty. 17β-Estradiol is the major estrogen secreted by the premenopausal ovary. It is synthesized from testosterone primarily in the ovarian granulosa cells and placenta, but small amounts can be produced in the adrenal gland. Plasma 17β-estradiol levels increase gradually between days 1-7 of the menstrual cycle followed by a sharp increase to a peak value of about 300 pg/ml on day 12, just prior to ovulation.

### References